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ABSTRACT

Traditionally, reading instruction has emphasized the visual-sound correspondences in language. The illusion that words can be "sounded-out" letter by letter and word by word to produce meaning needs to be re-evaluated according to the psycholinguistic nature of the reading process. Some nonvisual aspects of reading which are prerequisite to successful reader-author communication are (1) understanding that reading is a silent-visual activity for the purpose of deriving meaning from print; (2) perceiving oneself as a reader, through successful and enjoyable reading experiences; (3) sharing common thoughts and experiences with an author; (4) sharing common language patterns with an author; (5) producing appropriate intonation patterns, based on the ability to relate the rhythm of oral language to the visual language patterns on the page; (6) desiring to know what the author is communicating; (7) understanding that reading for meaning supersedes the correct pronunciation of each letter and/or word in the text; and (8) predicting an author's message through knowledge of language (syntax) and the world (semantics). (GW)

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NONVISUAL ASPECTS OF READER-AUTHOR COMMUNICATION

Traditionally, the visual-sound aspects of language have been emphasized in reading instruction. That is, children learn to recognize the letters of the alphabet and subsequently associate them with the sounds they represent. After learning sound-symbol relationships students are then encouraged to apply such knowledge by "sounding-out" unrecognized words using phonics rules. If all words in a sentence or story are "sounded-out" the meaning of the selection then becomes apparent.

The credibility of this simplistic-traditional notion of reading, however has recently been questioned by many reading teachers due to the research efforts of psycholinguists such as Smith (1975b) and Goodman (1967). The psycholinguistic definition of reading which has emerged in the last ten to fifteen years defines reading in terms of the communicative nature of language and the way language is acquired and processed - rather than as an accumulation of traditionally acclaimed approaches for teaching reading.

Is Reading a "Sounding-out" Process?

Smith (1975b) has recently indicated that the "sound-it-out" process does not function as well as most teachers assume it does. He suggests reasons for this - four of which are summarized here. First, he states that words are often ambiguous regarding their grammatical function, which in turn affects their pronunciation. For example, when "house" is used as a noun in the sentence, "John's family bought a new house", it is pronounced differently

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than it is when used as a verb - "They can house six people in their travel trailer".

A second problem encountered "sounding-out" words is the complexity of phonics rules. Smith asks, "How should words beginning with "ho" be pronounced?" The answer depends on the context of the word in which "ho" is used. That is, ..t, ..ot, ..ok, ..rizon, ..use, ..rse, ..pe, ..ney, ..ist, ..ur or ..nest. Smith also notes that in order to determine the sound "ho" represents in these words, one would read from right to left, contrary to the commonly held belief that one "sounds-out" words going from left to right.

A third problem deals with the perceptual limitations a reader experiences when processing print letter by letter.

> There is a limit to how much of the "visual information" of print the brain can process during reading. Flash a line of about thirty random letters on a screen for about a tenth of a second and the most an experienced reader will be able to recognize is four or five letters. This four-letter or five-letter limit in fact represents an entire second that it takes the brain to decide what these five letters are, it is not possible for anything else to be seen; a condition that can be characterized as "tunnel vision". In other words, for as long as one is trying to identify letters one after the other, reading is an impossibly slow and restricted process (Smith and Holmes, 1971).

Smith (1975a) also maintains that meaning is derived from the visual properties of print rather than from the sound represented by written language.

> Most of the words in the following sentence are "wrong" when written but not when spoken: "The none tolled hymn she had scene a pare of bear feat inn hour rheum." It is easy to detect the improperly spelled words in this sentence, an indication that we can get clues to the "meaning" of written words from their visual properties and from syntax, not their sound. If we attached meaning to words only through their sound, there would be no basis for asserting that any of the written words are spelled wrong.

If Smith is correct in his assertions, how then do readers derive meaning from print? The following discussion suggests an alternative point of view to the "sound-it-out" way.

Reading as a Communicative/Nonvisual Process

Psycholinguistic research has recently characterized reading as a communicative process whereby the reader predicts the thoughts of an author by sampling as little of the visual display (print) as possible (Goodman, 1967). How is it possible for a reader to predict an author's thoughts accurately without processing every segment of print? In addition to minimal visual cues, readers utilize both their oral language abilities and past experiences to predict an author's intentions - assuming they share common language patterns and experiences. For example, read the following cloze passage.

> The boy ran and ------ into the pool. The ---- problem was that he ------ to take his clothes ---. His mother was really ----- with him for getting --- new clothes wet.

Were you able to tell which words were missing? Were you using your knowledge of language and the world? Ask friends to do the exercise also. Then compare your results. Were your predictions reliable?

Thus, it would appear that readers do not depend solely on the visual aspects of reading, but also make use of their nonvisual understandings of language and the world to decode print. Meaning is not found in the ink - it is in the minds of readers and writers. Obviously, the reading act is inherently dependent on visual symbols; but, on the other hand, symbols are meaningless if the reader does not relate such print to his past experiences

and language patterns. Because symbols are completely dependent on human thought to bridge the gap between intrinsically meaningless print and meaning, it would appear that reading is mostly a nonvisual activity.

Nonvisual Considerations and Implications for Instruction*

As it appears that reading is mostly a communicative/nonvisual process, what are the nonvisual components of the reading process and what implications do they hold for reading instruction? The remainder of this article deals with the identification and discussion of eight of the nonvisual aspects of reading which are prerequisite to successful reader-author communication. Each of the topics discussed is followed by suggestions for implementing such ideas in the classroom. Hopefully, such concepts will be considered seriously, as traditional reading instruction has tended to de-emphasize the nonvisual aspects of reading due to the "sound-it-out" model which has characterized reading instruction for so long.

1. Understanding the Nature and Purpose of Reading - Downing (1970), Reid (1966), Vygotsky (1962) and Tovey (1976) suggest that many beginning readers experience difficulties learning to read partly because they do not understand the purpose and nature of reading. That is, reading is a communicative process whereby the reader communicates with the author vicariously by silently viewing the visual display of symbols on a page - not "sounding-out"

*The term nonvisual as used in the following discussion refers to any aspect of reading other than the impulses transmitted to the brain resulting from the sensations received from printed symbols.

words, talking, spelling, breathing and so on (Tovey, 1976). Children seem conditioned to view reading as an oral activity rather than a silent-visual activity for the purpose of deriving meaning from print (Tovey, 1976). Instruction that stresses the mechanical aspects of reading but fails to emphasize reading as a communicative process oftentimes confuses children, which may in turn bring on a sense of purposelessness, futility and/or failure.

Implications for Instruction: An effective way of helping children view reading as a silent-visual means of communicating with an author is through the use of short selections and the "Three Step Format". That is, after giving children short selections of high interest such as comic strips, cartoons, paragraphs from magazines and so on - ask: (Step 1) Are there any words you don't know? If so, ask and I will help you! (Step 2) Read the selection <u>silently</u> and (Step 3) Tell me what the selection was about in your own words.

Soon children learn that they are expected to get meaning from print - Step 3. This process conditions children to look for meaning whenever they are exposed to print instead of trying to "sound-it-out". Success will be realized if this approach is used frequently enough and its purpose is understood. These brief and enjoyable reading experiences help children overcome their erroneous concepts of reading and discover its real purpose by having many successful reading experiences. Soon, whenever these children see print they think of meaning not sound.

2. <u>Perceiving Oneself as a Reader</u> - Children who have experienced reading difficulties many times develop negative attitudes

toward reading and their ability to read. Don't children's perceptions of themselves as readers affect their reading performance? Aren't children limited by what they think they can do?

Implications for Instruction: Many children have never been given books they can read and want to read. Contrarily, in graded systems, they are often expected to read books which are too difficult. They have been convinced that they cannot read because of the many times they have experienced failure. Reading must be easy. If a book can't be found with print that a child can process easily (thin books), use dictation - children learn to read by reading stories they have dictated to their scribe/teacher. If such children have enough successful and enjoyable reading experiences they will begin perceiving themselves as readers. Why aren't books matched to students' interests and abilities to a greater degree?

3. Sharing Common Thoughts and Experiences with an Author - If children are to interact with the thoughts of an author, it is critical that they have "lived" the thoughts and experiences reflected in the text. A reader cannot communicate with an author regarding thoughts and experiences he has not had. Many times difficulties diagnosed as reading problems are really learning problems. That is, children must internalize the thoughts of the author through concrete and subsequent oral-aural experiences before trying to attach meaning to the written symbols that represent such ideas.

Implications for Instruction: If reader-author thoughts and experiences are to be matched, a self-selection process for

choosing books seems imperative. It is very unlikely that groups of boys and girls would choose the same book. Yet, many reading programs seem to make that assumption. Children should have the opportunity of choosing a book from a wide range of titles and reading levels. Besides having many books available, young readers should be exposed to newspapers, a variety of magazines and other reading materials of interest.

Materials that interest children will probably also reflect their thoughts and experiences. Usually, children are interested in topics with which they are familiar and knowledgeable.

4. Sharing Common Language Patterns with an Author - Language acquisition studies indicate that even though children do not acquire their oral language abilities totally by imitation, the language patterns they hear in their environment do ultimately influence their language usage. Otherwise, why would Chinese children sound Chinese, Black children speak with a Black dialect, and so forth? Therefore, in a pluralistic society many children come to school speaking in divergent language patterns. The question then, is , "What effect do divergent language patterns have on children's reading?

If children's language patterns do not match those used by an author, they will probably experience a moderate degree of difficulty. However, because of the extraordinary linguistic competencies most children possess, the mismatch is not as critical as some believe. For example, a Black child reading, "Henry went to the store", might read it, "Henry, he be going to the store." Such reading behavior, however, should not be viewed as deficient as it exemplifies second language learners' exceptional language

abilities. They not only derive meaning from the text as it is printed but also translate it into their own language patterns. Reading is facilitated, however, when language patterns in the text do match those of the reader.

Implications for Instruction: Divergent reading behavior should be viewed as a demonstration of children's linguistic competencies - as discussed above - not as a reading problem; the reader and author are communicating. The key for helping the dialect reader is accepting and understanding his language behavior. The reading behavior of children with divergent language patterns will slowly change as they internalize more fully the phonology and grammar of their second language by interacting with Standard English speakers aurally-orally.

On the other hand, for children who speak Standard English, matching materials to their language patterns is not such a problem if they read books that interest them. Such materials will probably match their language patterns as well as their thoughts and experiences as discussed in item 3. Thought and language patterns seem to be interrelated and inseparable; therefore, the implications for instruction given in item 3 also apply here for the child who speaks Standard English.

5. Producing Appropriate Intonation Patterns - When a selection is read orally, how does one know when to stop, pause, raise/lower the pitch of his voice - such as when asking questions - stress particular syllables within words and so on? Traditionally, punctuation markings have been viewed as providing such information. Smith (1975a) however, claims that punctuation marks follow the point in time when the reader decides what the melody and rhythm of a phrase should be. Therefore, it would appear that

such marks are not helpful in making such decisions.

Print provides readers little guidance related to the intonation of language. Lefevre (1964) states:

> Since most native speakers have an unconscious, intuitive control of these intonations in speech, this knowledge should be used to develop sentence sense in reading and writing.

The reproduction of the intonation patterns of an author seems to depend on the reader's ability to relate the melody and rhythm of his oral language to the visual language patterns found on the page.

Implications for Instruction: If children view reading as a communicative-predictive process and read for meaning, intonation does not seem to pose significant problems. On the other hand, if reading is viewed as naming words, halting irregular phrasing often occurs. It should also be noted, however, that skillful oral reading is difficult for most readers and requires much practice if a satisfactory performance is to be realized.

If teachers understand the nonvisual role of intonation in written language - as discussed above - it is unlikely that they will try to convince children that punctuation marks provide all the cues necessary for reproducing the intonation patterns inherent in the text.

Until teachers understand such concepts, reading instruction will fail to capitalize fully on the phenomenal oral-aural language abilities most readers possess.

6. Desiring to Know - Human beings seem to be born with a desire to know. From the first day of life, babies begin interacting with their environment. By the time children enter school

they not only know a great deal about their physical and social world but have also acquired most of the significant language patterns of their community. It would appear that most of the language learning that takes place before school entry is acquired informally and motivated by children's real needs whether they be physical, intellectual or emotional.

Effective language learning in school is also dependent on children's need to communicate with others "face to face" or vicariously in the context of meaningful learning experiences and/or social situations. When a child reads, will he be inclined to predict the thoughts of an author if he doesn't want to know what the author is communicating? Don't children read best when the text relates directly to their perceived needs and interests?

Implications for Instruction: Wanting to know is probably one of the most important factors underlying successful reading. Therefore, provide children with a wide array of children's books based on highly diversified topics which increases the probability of children locating books they want to read. The "magic moment" for the reluctant reader is when he encounters that "special" book which makes reading "come alive" for him. Providing children with motivating materials is critical if they are to succeed - not because such an idea is "educationally in", but because the desire to know is necessary if children are to predict/read the author's message successfully.

7. Reading for Meaning - As stated previously, traditional reading instruction has emphasized the learning of sound-symbol relationships in order to "sound-out" each word within sentences to produce meaning. Consequently, it seems that many teachers

have encouraged their students to "read" by pronouncing each letter and/or word "correctly" and precisely in order to keep the meaning intact.

More recent research findings (Smith, 1975b), however, suggest that readers begin with meaning rather than with the pronunciation of words. Smith claims that the pronunciation of words is not possible before children are aware of their grammatical function and meaning in the text. An example of this idea was given in the beginning (third paragraph) of this article. That is, "John's family bought a new house", versus "They can house six people in their travel trailer." Single words are not language. They must be processed with other words before their meaning becomes apparent. Reading is intrinsically a meaning-centered activity.

Implications for Instruction: The problems inherent with "sounding-out" words one by one to derive meaning from print (Smith, 1975b) seems to negate the value of "round-robin" reading which appears to emphasize the naming of words rather than "zeroing-in" on meaning. In "round-robin" reading, children take turns reading aloud to ensure their teacher that they know all the words. Not only is such a process ineffective, it seems to condition children to think of reading as an oral activity.

Therefore, reading needs to be stressed as a silent activity emphasizing meaning. Meaning should supercede the correct and precise pronunciation of each letter and/or word in the text. Good readers often substitute, add and delete words in the text, but rarely alter meaning significantly. Children can read for meaning if they understand the purpose of reading and are given guidance in selecting books that they want to read and can read.

They must also be given enough time in school to do it.

8. Predicting an Author's Message - How many teachers think of reading as a predictive process using as little visual information as possible? How many children are taught to view reading in this way? Do children predict when they read? It would appear that most children eventually become fluent readers/predictors in spite of the instruction they receive. Most young readers, however, would probably learn to read faster and more easily if they viewed reading as a process of deriving meaning from print without processing every letter and/or word. As stated previously, children are able to predict an author's thoughts without viewing every segment of print because of their implicit knowledge of syntax (rules for combining words into sentences) and semantics (meaning aspects of language). For example, what words are missing in the following sentence? While running, the little --- fell and hurt his ----. Could you "guess" which words were missing? Additional text would make your predictions even more reliable.

Implications for Instruction: As implied throughout this discussion, the predictive process is facilitated by encouraging children to read books that are of interest and not too difficult. "Not too difficult" refers not only to the complexity of language but also the amount of print on any given page. When confronted with a "thick book" many children are overwhelmed before they start, even though they could process the material if it were presented to them in smaller units. Children need to read many "thin books" to build their confidence and competencies as a reader. Reading must be "easy" if children are to become involved maximally in the predictive process. Otherwise, they become

discouraged and resort to "sounding-out" words one by one.

Children can also be conditioned to use their knowledge of language (syntax) and the world (semantics) to predict unknown words they encounter. For example, when children ask, "What word is that?", instead of telling them, ask, "What do you think it is?" This forces them to use their syntactic and semantic knowledge to predict the unknown word. If the child still doesn't recognize a word such as "licked" in the sentence, "The brown bear licked the honey", ask him, "What do bears do with honey?" You might also ask him to read the rest of the paragraph or page to see if he can discover the idea that "l-i-c-k-e-d" represents. The more text available the more likely unknown words will be recognized. Especially if they are repeated frequently throughout the story.

In Closing

This discussion is not presented as a comprehensive all-inclusive treatment of the nonvisual aspects of reading. It does suggest, however, that the illusion that words can be "sounded-out" letter by letter and word by word to produce meaning needs to be re-evaluated according to the psycholinguistic nature of the reading process.

This point of view is also supported by Kolers (1968) in an article entitled "Reading is Only Incidentally Visual." He recommends -

> . . . that the teaching of reading move away from the purely visual and purely geometric - even from the symbol-sound relations that are now being taught - and emphasize the clue-search and information-extracting characteristic of reading.

It should not be inferred from this discussion, however, that the visual aspects of reading are unimportant. That would be absurd. Traditionally, however, reading instruction has tended to overemphasize the visual-sound aspects of language thus implying that meaning is found in the ink and/or sound. In turn, the function of the eye seems to have been viewed - consciously or not - as receiving and then communicating such meaning to the brain. Eyes can neither receive nor communicate meaning - their role is to receive and transmit visual sensations as impulses to the brain where they are processed into meaning. Eye movements are initiated and guided by cognitive activity, not the reverse. Therefore, the symbolic role of the visual component of the reading process should not be confused with the nonvisual reality and dynamics of thought and language which makes reader-author communication possible.

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